

NPS and NASA Teacher Workshop: Making the Sun-Earth Connection



Join the National Park Service (NPS) and National Aeronautics and Space Administration (NASA) for an exciting hands-on workshop that offers teachers a variety of ways to explore the Sun-Earth system with their K-8th grade students! Also explore how the Sun influences the native vegetation of the Santa Monica Mountains, and learn about the Sun-Earth connections of the Chumash and Navajo.

Date: June 29 & 30, 2006

Time: June 29 from 8:00 am–4:00 pm and
June 30 from 8:00 am – 3:30 pm

Location: Santa Monica Mountains National Recreation Area, Thousand Oaks, CA

Registration and Materials Fee: A non-refundable \$35.00 materials fee is required of all participants in advance of the workshop. Please see registration form for more details.

Registration Deadline: Monday, June 12, 2006. Workshop is filled on a first come, first served basis.

Continuing Professional Education (CPE) Credit: One (1) credit is available through California Lutheran University for this course. There is a \$60.00 fee which will be collected on the first day of the workshop payable to California Lutheran University. Registration forms will be available and completed at the workshop. Continuing Professional Education Credits are not applicable to credentials or graduate programs. They are designed to meet the continuing education requirements for teachers in California. Not all districts will accept these credits for salary allocation. Participants are responsible for checking with their district's salary allocation department and/or their collective bargaining agreement for information on the applicability of these credits.

Course Details: Ruth Paglierani, Coordinator for Public Programs, and Greg Schultz, Education/Outreach Scientist and Teacher Educator, from the Center for Science Education at the Space Sciences Lab, University of California, Berkeley, will present a wide variety of hands-on curriculum-based lessons and activities including:



Sun-Earth Science: The Astronomy of Seasons

"Reasons for Seasons" GEMS Guide

- Name the Season
- Sun-Earth Survey
- Trip to the Sun
- What Shape is Earth's Orbit?
- Tilted Earth
- The Angle of Sunlight & Seasons Unraveled

Break Out Sessions

Session One (Grades 5-8): More Seasons Activities

- Living with a Star Activities
- Temperatures, and Day and Nights Around the World

Session Two (Grades K-4): Eye on the Sky

- Eye on the Sky Curriculum Overview
- Table Top Eclipse
- Sun-Earth-Moon Model
- Create Sun Books

The Sun's influence on the land and Native Americans will also be explored. Speakers from the National Park Service, Ventura County and the Southwest are scheduled to discuss:

Seasons in the Sun: Plant Growth and Survival in the Mediterranean Climate

(This is an indoor and outdoor session with a short walk.)

- Mediterranean Biome of Southern California
- Relationship of light, heat and water loss in plants
- Plant energy budgets
- Plant challenges and adaptations for managing light and heat
- Vegetation distribution patterns as determined by light and heat

Chumash Perspectives

- Story of the Sky People
- Painted and Solstice Caves
- Winter and Summer Solstice
- Stories of the Sun and Two Daughters
- Cultural considerations when teaching students about Chumash culture

Navajo Perspectives

- Summer and the concept of the Holy People
- Ceremonials and healing within certain times of the year
- Sand paintings or dry paintings and their connections to Navajo constellations
- Cultural considerations when teaching students about Navajo culture

For more information: Contact Lisa Okazaki, Park Ranger, 805-370-2348 or lisa_okazaki@nps.gov.



Santa Monica Mountains National Recreation Area 2006 Teacher Workshop Registration Form

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Making the Sun-Earth Connection
June 29 & 30, 2006

Registration Information

A valid registration includes this completed form (2 pages) and payment of the \$35.00 materials fee. A separate registration form is required for each participant.

Registration deadline is Monday, June 12, 2006.

- Please make your \$35.00 check payable to Western National Parks Association.
- Mail registration form and check to:
Santa Monica Mountains National Recreation Area
Attn: Education Programs, Barbara Applebaum or Lisa Okazaki
401 West Hillcrest Drive
Thousand Oaks, CA 91376
- Fees are non-refundable.
- We cannot hold reservations without payment.
- Workshops are filled on a first come, first served basis.

Participant Information

Participant Name _____ Grade You Teach _____

Mailing Address _____

School _____ School District _____

School Address _____

Home Phone # _____ Cell Phone # _____

Work Phone # _____ E-mail Address _____

How did you hear about the workshop? _____

Do you have any accessibility needs that we should be aware of? _____

Continuing Professional Education (CPE) Credit

Continuing Professional Education credit is available through California Lutheran University. Registration for CPE credit will take place on the first day of the workshop.

Are you taking the workshop for Continuing Professional Education Credit? Yes____ No____
(continued)

Pre-Workshop Questions

What have you traditionally taught in science? _____

How much time per week do you spend teaching science? _____

Are you a Science Resource Specialist? _____

Do you train other teachers? Yes___ No___

Lunch will be provided on the first day of the workshop. Which do you prefer?

Please check one: ___Vegetarian ___ Non-vegetarian

Do you have any special dietary restrictions? _____

For more information

Contact Lisa Okazaki at (805) 370-2348 or lisa_okazaki@nps.gov.